

THE PUBLIC SERVICE COMMISSION
OF THE
COMMONWEALTH OF PENNSYLVANIA

Rules and Regulations

PERTAINING TO

Gas Service Utilities

Electric Utilities

Heating Service Utilities

Water Service Utilities

ADOPTED APRIL 9, 1914

PREPARED BY

Prof. R. H. Fernald, University of Pennsylvania

Prof. L. H. Harris, University of Pittsburgh



HARRISBURG, PA.:

WM. STANLEY RAY, STATE PRINTER

1914

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NOTE

Nothing contained in these Rules shall be construed as relieving any Utility from the performance of any of its legal duties to the public.

By Order of

THE PUBLIC SERVICE COMMISSION
of the
COMMONWEALTH OF PENNSYLVANIA.

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COMMONWEALTH OF PENNSYLVANIA

PART I.

GENERAL.

Definition:

The term "utility" as used in these rules includes all public service companies, corporations and persons, as defined in The Public Service Company Law, engaged in the production, sale or distribution of gas within the jurisdiction of the Commission.

I. Statutory:

"It shall be the duty of every public service company to furnish and maintain such service, including facilities, as shall in all respects be just, reasonably adequate, and practically sufficient for the accommodation and safety of its patrons, employees, and the public, and in conformity with such reasonable regulations or orders as may be made by the Commission."

II. Pressure Variation:

Each utility furnishing manufactured gas shall maintain at the consumer's meter outlet a gas pressure of not less than one and one-half inches nor more than eight inches of water pressure; and within said limits the daily variation of pressure at the outlet of any one meter on the system shall never be greater than one hundred (100 %) per cent. of the minimum pressure. Each utility furnishing natural gas shall maintain at the consumer's meter outlet a gas pressure of not less than one and one-half inches, nor more than fourteen inches of water pressure, except when greater pressure is specifically provided in the contract between the utility and the consumer, provided there shall be no unfair and unreasonable discrimination or preference; and within the said limits the daily variation of pressure at the outlet of any one meter on the system shall never exceed four inches of water pressure above or below the normal pressure maintained at such point of delivery, unless it can be shown to the Commission that such greater variation is due to extraordinary demand or extreme weather.

Provided, that variations in pressure caused by operation of consumer's apparatus in violation of contract or the rules of the utility, or by causes entirely beyond the control of the utility, shall not be considered a violation of this rule.

III. Required Heating Value:

Each utility furnishing manufactured gas service must supply gas which when tested within a one mile radius from the point of manufacture, shall give a monthly average of not less than 570 British thermal units total heating value per cubic foot, as referred to standard condition of temperature and pressure, except gas which in the opinion of the Commission, is produced as a by-product in the manufacture of coke, which gas shall give a monthly average of not less than 550 British thermal units per cubic foot. The minimum heating value of manufactured gas shall never fall below 520 British thermal units except for by-product coke over gas as indicated above, which shall never fall below 500 British thermal units. Manufactured gas delivered to the mains under pressures above 5 pounds per square inch shall be tested for heating value before compression. The minimum heating value of natural gas supplied by any utility shall never fall below 800 British thermal units per cubic foot, as referred to standard condition of temperature and pressure.

IV. Sulphur Requirements:

In no case shall manufactured gas contain more than 30 grains of total sulphur per 100 cubic feet.

V. Service Interruptions:

Each utility shall keep a record of all interruptions to service on the entire system or any portion thereof belonging to the utility, which record shall contain the time, extent and duration of the interruption, and shall be kept as specified in Rule IX.

VI. Complaint Records:

Each utility shall keep a record of all written complaints received from its consumers in regard to service, which record shall show the name and address of the complainant, the date and nature of the complaint, the action taken, and the date of final disposition of the matter. This record shall be kept as specified in Rule IX.

VII. Inspection of Equipment:

Each utility shall inspect its equipment and facilities, including the necessary tests for water and leaks in its lines, in accordance with good practice, and in a manner satisfactory to the Commission, and shall maintain as specified in Rule IX, a complete record of all such

inspections and tests, and shall file with the Commission a statement of the condition of its equipment and facilities, and such copies of its reports of inspections, when and in such form as the Commission may require.

VIII. Accidents.

Each utility shall keep a record of and shall furnish to the Investigator of Accidents for the Commission, in accordance with the rules of the Commission, reports of any and all accidents happening in or about or in connection with the operation of its property, facilities or service, wherein any person shall have been killed or injured, or property damaged or destroyed, with a full statement as far as possible of the causes of such accidents, and the precautions, if any, taken as prevention against future accidents of similar character.

IX. Records and Reports:

All records required by these Rules shall be kept within the State at an office or offices of the utility located in the territory served by it, and shall be open for examination by the Commission or its representative. Each utility shall notify the Commission of the office or offices at which the various classes of records are kept and shall file with the Commission, such reports as the Commission may from time to time require.

PART II.

METERS, CALORIMETERS, ETC.

X. Allowable Error:

No gas meter shall be placed in service nor allowed to remain in service, which shows in comparison with a standard gas prover, an error greater than two (2%) per cent. when gas at the standard test rate of flow is passing through it.

XI. Periodic Tests:

No utility furnishing metered gas service shall allow a gas meter to remain in service for a period longer than five years without checking it for accuracy, or readjusting it if found to be incorrect beyond the limits established by Rule X. Proportional meters shall be tested once every five years and readjusted if necessary, and cleaned by a competent man at least once each three months.

XII. Meter Test Records:

Whenever a gas service meter is tested, the original test record shall be kept, indicating the information necessary for identifying the meter, the reason for making the test, the reading of the meter before being disturbed, and the accuracy of the meter, together with all the data taken at the time of the test. This record must be sufficiently complete to permit the convenient checking of the methods employed, and the calculations made. A record shall also be kept, preferably numerically arranged, indicating date of meter purchase, when purchased after July 1, 1914, name of manufacturer, its size, its identification, its various places of installation, with dates of installation and removal, and the dates and general results of all tests. These records shall be kept as specified in Rule IX.

XIII. Installation of Meters:

Each gas service meter installed after July 1, 1914, shall have been tested for accuracy by the utility within one year previous to its installation. It shall also be inspected by the utility for proper connections, mechanical conditions, and suitability of location within sixty (60) days after installation.

XIV. Facilities for Testing:

Each utility shall provide and maintain suitable and adequate facilities for testing its gas service meters, in each case to be satisfactory to and approved by the Commission. Each utility shall pro-

vide a suitable meter prover, of not less than five (5) cubic feet capacity, equipped with suitable thermometers and other necessary accessories, and shall maintain the same in proper adjustment to register the condition of the meters within one-half of one per cent. The accuracy of all provers will be established from time to time by a representative of the Commission at a place to be designated by it. After January 1, 1915, tests made with an uncertified prover will not to be deemed authoritative.

XV. Pressure Surveys:

Each utility shall provide itself with one or more graphic recording pressure gauges, and shall make frequent measurements of the gas pressure and pressure variation throughout its system. Charts from these gauges showing the pressure variations shall be kept for at least two years as specified in Rule IX. The accuracy of all pressure gauges will be established from time to time by a representative of the Commission at a place to be designated by it. After January 1, 1915, tests made with an uncertified pressure gauge will not be deemed authoritative.

XVI. Calorimeter Tests:

Each utility whose gas output exceeds twenty million cubic feet per year shall equip itself with a complete standard calorimeter outfit approved by the Commission, by which it shall determine the heat value of manufactured gas at least three days each week, and of natural gas at least three times per year. A complete record of all these tests shall be kept as specified in Rule IX. The accuracy of all calorimeters will be established from time to time by a representative of the Commission at a place to be designated by it. After January 1, 1915, tests made with an uncertified calorimeter will not be deemed authoritative.

XVII. Meters in Service without Test Records:

All gas meters in service on and after July 1, 1914, for which there is no record test within five years, must be tested as soon thereafter as circumstances will permit, and in all cases within three years from July 1, 1914.

XVIII. Request Tests:

Each utility shall upon the written request of a consumer, and if he so desires, in his presence or that of his authorized representative, make a test of the accuracy of his meter. When a consumer desires, either personally or through a representative, to witness the testing of a meter, he may require the meter to be sealed in his presence before removal, which seal shall not be broken until the test is made in his

presence. If the meter so tested shall be found to be accurate within the limits specified in Rule X, a fee determined from the schedule indicated below, shall be paid to the utility by the consumer requiring such test; but if not so found, then the cost thereof shall be borne by the utility furnishing the service. When making such request, the consumer shall agree to the basis of payment herein specified. A report of such test shall be made to the consumer, and a complete record of such test shall be kept on file as specified in Rule IX.

The amount of the fee to be charged by the utility for testing meters upon written complaint of consumers, shall be determined by the manufacturers' designated rating, as follows:

Positive Meters.

Meters of 10-Lt. capacity or under, or having a rated capacity of 200 cubic feet per hour or under,	\$2.00
Meters of over 10-Lt. capacity and not exceeding 30-Lt. capacity, or having a rated capacity exceeding 200 cubic feet per hour, and not exceeding 600 cubic feet per hour,	4.00
Meters of over 30-Lt. capacity and not exceeding 80-Lt. capacity, or having a rated capacity exceeding 600 cubic feet per hour, and not exceeding 1,500 cubic feet per hour,	6.00
Meters of over 80-Lt. capacity, or having a rated capacity exceeding 1,500 cubic feet per hour,	10.00

Proportional Meters.

All Proportional Meters not exceeding 15,000 cubic feet per hour rated capacity,	15.00
All Proportional Meters of over 15,000 cubic feet and not exceeding 30,000 cubic feet per hour,	20.00
All Proportional Meters of over 30,000 cubic feet and not exceeding 50,000 cubic feet per hour rated capacity,	30.00
All Proportional Meters of over 50,000 cubic feet and not exceeding 100,000 cubic feet per hour rated capacity,	40.00
All Proportional Meters of over 100,000 cubic feet per hour rated capacity,	50.00

Rates for testing meters not included in the above classification, or which are so located that the cost is out of proportion to the fee specified, will be furnished by the Commission upon receipt of complete specifications.

XIX. Refunds:

If a meter be found to be fast at any test by more than two (2%) per cent., an allowance or refund shall be made to the consumer by the utility, equal to all the excess charged the consumer, figured back from the date of test through the entire period of the current bill, unless it can be shown that the error is due to an accident or other cause the exact date of which can be determined, in which case it shall be figured back to such time.

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PART I.

GENERAL.

Definition:

The term "utility" as used in these rules includes all public service companies, corporations and persons, as defined in The Public Service Company Law, engaged in the production, sale or distribution of electricity within the jurisdiction of the Commission.

I. Statutory:

"It shall be the duty of every public service company to furnish and maintain such service, including facilities, as shall in all respects be just, reasonably adequate, and practically sufficient for the accommodation and safety of its patrons, employees, and the public, and in conformity with such reasonable regulations or orders as may be made by the Commission."

II. Voltage Variation:

Each utility supplying electrical energy from a constant voltage system, shall adopt standard service voltages for such system, the suitability and adequacy of which voltages may be determined at any time by the Commission, and every reasonable effort shall be made to maintain such voltage practically constant at all times during which service is supplied. For service rendered under a lighting contract, or primarily for lighting purposes, the variations of voltage as measured at the service terminals shall not exceed five (5%) per cent., plus or minus, of the standard service voltage for that locality, for a longer period than one minute at each instance, at any time during which service is supplied. For service rendered under a power contract, or primarily for power purposes, voltage variations as measured at the service terminals shall not exceed ten (10%) per cent., plus or minus, of the standard service voltage for that locality for a longer period than one minute at each instance: Provided, First, That this limit of ten (10%) per cent., shall not apply to power supplied from direct current trolley wires;

and, Second, That a utility may, if satisfactory to and approved by the Commission, furnish service under conditions of greater voltage variations, (a) upon filing with the Commission a copy of all existing contracts containing a provision for service with such greater variation of voltage, or, (b) upon filing with the Commission a copy of all existing contracts which do not contain a provision for such greater variations in voltage, together with a statement in each case of the variations in voltage existing in the service rendered under each said contract, and (c) upon filing with the Commission a copy of all contracts made hereafter which contemplate service under conditions of greater voltage variations, and which shall in each case henceforth contain a clause stating the probable variations in voltage that will occur in the service rendered under said contract: And provided, further, that such greater variations in the voltage shall not result in unreasonable discrimination in favor of or against any consumer. Variations of voltage in excess of those specified above, caused by the operations of the consumer in violation of his contract or the rules of the utility, or from causes beyond the control of the utility, shall not be considered a violation of this rule.

III. Record of Station Voltage:

Each utility shall keep in continuous operation at least one graphic recording voltmeter in each generating station. Each utility shall also place and connect additional graphic recording voltmeters at such places and for such periods of time as the Commission may from time to time require. All records from such meters shall be kept on file as specified in Rule X.

IV. Standard Frequency:

Each utility supplying alternating current shall adopt a standard frequency, the suitability of which may be determined by the Commission, and shall maintain this frequency within five (5%) per cent. plus or minus, of standard, at all times during which service is supplied: Provided, That momentary variations of frequency of more than five (5%) per cent. which are clearly due to no lack of proper equipment or reasonable care on the part of the utility, shall not be considered a violation of this rule.

V. Records of Load and Interruptions:

Each utility shall keep a record of the time of starting and disconnecting all street lighting circuits; of the readings of such instruments at each generating station, and at such intervals as are necessary to determine the characteristics of the load; and of all interruptions to service affecting the busbars, feeders, or distributing mains, which record shall show the time, duration, extent, and the

cause when known, of the interruption. An interruption is here defined for the purpose of record only, as the interval of time during which the voltage falls below fifty (50%) per cent. of standard voltage. All such records shall be kept as specified in Rule X, for at least two years.

VI. Complaint Records:

Each utility shall keep a record of all written complaints received from its consumers in regard to service, which record shall show the name and address of the complainant, the date and nature of the complaint, the action taken, and the date of final disposition of the matter. These records shall be kept as specified in Rule X.

VII. Maintenance and Inspection:

Each utility shall maintain its equipment and facilities, and shall make periodic inspection of the same, all in accordance with good practice, and in a manner satisfactory to the Commission. Each utility shall also keep a complete record of all such inspections, as specified in Rule X, and shall file with the Commission a statement of the condition of its equipment and facilities, and such copies of its reports of inspections, when and in such form as the Commission may require.

VIII. Defective Apparatus:

Whenever any equipment or facilities, the failure of which would involve life hazard, are removed from service for any reason, they must be thoroughly inspected and tested before being again placed in service, and no equipment or facilities shall be placed in service or continued in service, which have for any reason become dangerous, or liable to cause injury to persons or damage to property.

IX. Accidents:

Each utility shall keep a record of and shall furnish to the Investigator of Accidents for the Commission, in accordance with the rules of the Commission, reports of any and all accidents happening in or about or in connection with the operation of its property, facilities or service, wherein any person shall have been killed or injured, or property damaged or destroyed, with a full statement as far as possible of the causes of such accidents, and the precautions, if any, taken as prevention against future accidents of similar character.

X. Records and Reports:

All records required by these Rules shall be kept within the State, at an office or offices of the utility located in the territory served

by it, and shall be open for examination by the Commission or its representative. Each utility shall notify the Commission of the office or offices at which the various classes of records are kept, and shall file with the Commission such reports as the Commission may from time to time require.

PART II.

METERS.

XI. Allowable Error:

No watt-hour meter shall be placed in service nor allowed to remain in service, which registers at no load when the applied voltage is less than one hundred and ten (110%) per cent. of standard service voltage, nor which is in any way mechanically defective, nor which has incorrect constants, nor an error in measurement in excess of four (4%) per cent.

XIII. Method of Determining the Error:

The error of a service watt-hour meter shall be determined as follows: The error at light load—here defined as not less than five (5%) per cent. nor more than ten (10%) per cent. of rated capacity for induction type meters, and not less than ten (10%) per cent. nor more than fifteen (15%) per cent. of rated capacity for commutator type and mercury type meters—shall be determined by taking the average of at least two errors, determined from as many separate readings of the same light load, which errors must agree with each other within one-half ($\frac{1}{2}$ %) per cent. of registration accuracy. In the same manner the error at heavy load—here defined as not less than seventy-five (75%) per cent. nor more than one hundred (100%) per cent. of rated capacity—shall be determined.

The error of the meter shall then be determined by taking the average of the error at light load and the error at heavy load, proper account being taken of the sign of these two errors: Provided, That where, the consumer's connected load does not equal seventy-five (75%) per cent. of the rated capacity of the meter, the full connected load may be considered as heavy load for purposes of test.

In all cases where it is not practicable to determine the error by the method outlined above, the utility shall have the option of installing an approved check meter or meters, and determining the error of the service meter by comparing the watt-hours registered by the check meter with the watt-hour registered by the service meter in the same time. When this option is exercised, the check meter shall be left in circuit until the hand on the first dial of the service meter shall have made at least two complete revolutions. If a utility desires to use "per cent. registration" or "accuracy," in place of "per cent. error," the per cent. registration shall be determined in the same manner as provided above for determining per cent. error.

XIII. Meter Record.

Each utility shall maintain a record of all its service watt-hour meters, which record shall show the name of the manufacturer, the type, the rating, the date of purchase when purchased after July 1st, 1914, the date and location of all installations in service and the removals therefrom, the date of all tests and the reasons therefor, and the error "as found" and "as left." This record shall be kept as specified in Rule X, and shall be complete and up to date within three years subsequent to July 1st, 1914.

XIV. Test Previous to Installation:

Each watt-hour meter installed after July 1st, 1914, shall have been tested for accuracy by the utility within ninety (90) days previous to its installation, or shall be so tested within sixty (60) days thereafter. It shall also be inspected by the utility for proper connection, mechanical condition, and suitability of location within sixty (60) days after the installation.

XV. Facilities for Testing:

Each utility shall provide for and have available, suitable and adequate facilities for testing its watt-hour meters, in each case to be satisfactory to and approved by the Commission. These facilities shall, in general, include a test bench free from unnecessary encumbrances, one or more portable rotating standard watt-hour meters, a suitable check meter or meters mounted on the test bench, and such other necessary equipment as the Commission may require. The check meter shall be the reference standard for the utility, and shall be periodically tested for accuracy, and adjusted when necessary by a representative of the Commission, and at such place as the Commission may direct. Immediately after making final adjustment, the tester shall seal and date tag the meter, and shall furnish the utility with a correction curve properly dated and signed.

The portable rotating standard shall also be tested and adjusted periodically by a representative of the Commission, and at such place as the Commission may direct. The tester shall furnish the utility with a correction curve properly dated and signed. During the interval between tests by the Commission, the portable standard shall be compared with the check meter at least once each week for commutating types, and at least once every two weeks for induction types, during the time the portable meter is in service, and the calibration thus obtained shall be used in determining the error of the service meters. A complete record of these check-tests shall be kept for at least two years, as specified in Rule X. This record shall show the condition and accuracy of the rotating standard "as found"

and "as left;" all in such form and such detail as to permit of convenient checking of the method and results.

All correction curves furnished by the Commission shall be kept with the meter until superseded. After January 1, 1915, tests made with uncertified facilities will not be deemed authoritative.

XVI. Frequency of Periodic Tests:

Each utility shall make periodic tests of all its watt-hour meters in service, in accordance with the following schedule:

- (a) Two and three wire commutating type and mercury type meters, up to and including fifty (50) amperes rated capacity of meter element, shall be tested at least once every eighteen (18) months.
- (b) Two and three wire commutating type and mercury type meters of over fifty (50) amperes rated capacity of meter element, shall be tested at least once every twelve (12) months.
- (c) Two and three wire single phase induction type meters, up to and including twenty-five (25) amperes rated capacity of meter element, and manufactured prior to January 1st, 1907, shall be tested at least once every thirty (30) months. Meters of the same type and rating manufactured since January 1st, 1907, shall be tested at least once every thirty-six (36) months.
- (d) Two and three wire single phase induction type meters of over twenty-five (25) amperes rated capacity of meter element, shall be tested at least once every twenty-four (24) months.
- (e) Self contained polyphase meters up to and including fifty (50) k. w. rated capacity, shall be tested at least once every eighteen (18) months.
- (f) Self contained polyphase meters of over fifty (50) k. w. rated capacity, shall be tested at least once every twelve (12) months.
- (g) Polyphase meters connected through current transformers, or current and potential transformers, to circuits up to and including fifty (50) k. w. rated capacity, shall be tested at least once every twenty-four (24) months.
- (h) Polyphase meters connected through current transformers, or current and potential transformers, to circuits of over fifty (50) k. w. rated capacity, shall be tested at least once every eighteen (18) months.

Whenever the number of meters of any type which register in error beyond the limits specified in Rule XI, is deemed by the Commission to be excessive, then this type shall be tested with such additional frequency as the Commission may direct.

XVII. Meters in Service Without Test Records:

All watt-hour meters in service on and after July 1, 1914, for which there is no record of test within the time equal to the period of test for that class and rating of meter as specified in Rule XVI, shall be tested as soon thereafter as circumstances will permit. In no case shall the time subsequent to July 1, 1914, exceed the length of time of the period of test for meters of that class and rating as specified in Rule XVI.

XVIII. Request Tests:

Each utility shall upon the written request of a consumer, and if he so desires, in his presence or that of his authorized representative, make a test of the accuracy of his meter. When a consumer desires, either personally or by a representative, to witness the testing of a meter, he may require the seal of the meter to be broken only in his presence or that of his representative. If the meter so tested shall be found to be accurate within the limits specified in Rule XI, a fee determined from the schedule indicated below, shall be paid to the utility by the consumer requiring such test; but if not so found, then the cost thereof shall be borne by the utility furnishing the service. When making such request, the consumer shall agree to the basis of payment herein specified. A report of such test shall be made to the consumer, and a complete record of such test shall be kept on file as specified in Rule X.

Schedule of Fees For Testing Watt-Hour Meters.

- (a) For direct current and single phase meters operating on 600 volts or less, up to and including twenty-five (25) amperes rated capacity of the meter element, \$1.50
 - (b) For each additional fifty (50) amperes or fraction thereof, \$.50
 - (c) For single phase meters above 600 volts, and for polyphase meters with or without instrument transformers, up to and including twenty-five (25) k. w. rated capacity of the circuit,..... \$2.50
 - (d) For each additional twenty-five (25) k. w. rated capacity, or fraction thereof, \$2.50
- Rates for meters not included in the above classification, or so located that the cost is out of proportion to the fee specified, will be furnished by the Commission upon receipt of complete specifications.

XIX. Power Factor Adjustment:

All alternating current watt-hour meters which are provided with a power factor compensation, should be tested and adjusted for correct registration within two (2%) per cent. plus or minus, at one hundred (100%) per cent. power factor, and within four (4%) per cent. at zero or fifty (50%) per cent. power factor (lagging) before installation. All alternating current watt-hour meters in service which have not been so tested and adjusted before installation, and which are connected to circuits supplying other than non-inductive power factor, and at zero or fifty (50%) per cent. lagging power load, shall be tested for accuracy at one hundred (100%) per cent. factor. In all cases where it is not practicable to determine the error of the meter at these power factors, the utility shall have the option of installing an approved check meter, and determining the error as provided in the last paragraph of Rule XII.

XX. Place of Making Tests:

All tests provided for in Rules XIV, XVI and XVIII, and except those made previous to installation as provided for in Rule XIV, shall be made in the place of permanent location on the consumer's premises, with approved equipment and under local conditions.

XXI. Watt-Hour Meter Tests Without Accessories:

In all cases where a service watt-hour meter is connected to the line through shunts, multipliers, or instrument transformers, the test may be made on the meter as a self contained unit, and the ratio of the accessories used to determine the error of the meter, provided that the certificates of the accessories bear a date within five years, and are satisfactory to the Commission.

XXII. Adjustment After Test:

All service watt-hour meters shall be so adjusted after test that the error of the meter as defined in Rule XII shall not exceed two (2%) per cent. Neither shall the error at light load exceed four (4%) per cent., nor the error at heavy load exceed two (2%) per cent.

XXIII. Change of Frequency:

If a utility shall change its standard of frequency, it shall give reasonable notice to all its consumers, and shall make tests and shall readjust all watt-hour meters as soon thereafter as practicable, and shall refund to the consumer all the excess charges which have been collected from him by reason of the change of frequency.

XXIV. Refund for Overcharge:

If a meter be found to be fast by more than four (4%) per cent. as defined in Rule XII at any test, an allowance or refund shall be

made to the consumer by the utility, equal to all the excess charged the consumer, figured back from the date of test through the entire period of the current bill, unless it can be shown that the error is due to an accident or other cause, the exact time of which is known, in which case it shall be figured back to such time.

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PART I.

GENERAL.

Definition:

The term "utility" as used in these rules includes all public service companies, corporations and persons, as defined in The Public Service Company Law, engaged in the production, sale or distribution of heat within the jurisdiction of the Commission.

I. Statutory:

"It shall be the duty of every public service company to furnish and maintain such service, including facilities, as shall in all respects be just, reasonably adequate, and practically sufficient for the accommodation and safety of its patrons, employees, and the public, and in conformity with such reasonable regulations or orders as may be made by the Commission."

II. Service Interruptions:

Each utility shall keep a record of all interruptions to service on the entire system or any portion thereof, belonging to the utility, which record shall contain the time, cause, extent and duration of the interruption, and shall be kept as specified in Rule VI.

III. Complaint Record:

Each utility shall keep a record of all written complaints received from its consumers in regard to service, which record shall show the name and address of the complaint, the date and nature of the complaint, the action taken, and the date of final disposition of the matter. This record shall be kept as specified in Rule VI.

IV. Inspection of Equipment:

Each utility shall inspect its equipment and facilities, in accordance with good practice, and in a manner satisfactory to the Commission, and shall maintain a complete record of all such inspections and tests as specified in Rule VI.

V. *Accidents:*

Each utility shall keep a record of and shall furnish to the Investigator of Accidents for the Commission, in accordance with the rules of the Commission, reports of any and all accidents happening in or about or in connection with the operation of its property, facilities or service, wherein any person shall have been killed or injured, or property damaged or destroyed, with a full statement as far as possible of the causes of such accidents, and the precautions, if any, taken as prevention against future accidents of similar character.

VI. *Records and Reports:*

All records required by these Rules shall be kept within the State, at an office or offices of the utility located in the territory served by it, and shall be open for examination by the Commission or its representative. Each utility shall notify the Commission of the office or offices at which the various classes of records are kept, and shall file with the Commission such reports as the Commission may from time to time require.

PART II

METERS.

VII. Allowable Error:

No condensation meter or hot water meter shall be placed in service nor allowed to remain in service, which has an error in registration of more than four (4%) per cent. when the water at its average temperature and standard test rate of flow is passing through the meter.

VIII. Periodic Tests:

No utility furnishing metered heating service shall allow a condensation meter to remain in service for a period longer than two years, or hot water meter to remain in service for a period longer than four years, without checking it for accuracy and readjusting it if found to be incorrect beyond the limits established by Rule VII.

IX. Meter Test Records:

Whenever a heating service meter is tested, the original test record shall be kept as specified in Rule VI. This record shall indicate the information necessary for identifying the meter, the reason for making the test, the reading of the meter before being disturbed, and the accuracy of the meter, together with all data taken at the time of the test. This record must be sufficiently complete to permit the convenient checking of the methods employed and the calculations made. A record shall also be kept, preferably numerically arranged, indicating date of meter purchase, when purchased after July 1st, 1914, name of manufacturer, its size, its identification, its various places of installation with dates of installation and removal, and the dates and general results of all tests.

X. Installation of Meters:

Each heating service meter installed after July 1st, 1914, shall have been tested for accuracy by the utility within one year previous to its installation. It shall also be inspected by the utility for proper connections, mechanical conditions, and suitability of location within sixty (60) days after installation.

XI. Facilities for Testing:

Each utility shall provide and maintain suitable and adequate facilities for testing its heating service meters, in each case to be satisfactory to and approved by the Commission. Each utility shall own

a complete meter testing equipment of a form approved by the Commission. The accuracy of this testing equipment shall be established from time to time by a representative of the Commission at a place to be designated by it. After January 1, 1915, tests made with uncertified equipment will not be deemed authoritative.

XII. Meters in Service without Test Records:

All condensation meters in service on and after July 1st, 1914, for which there is no record of test within two years, must be tested as soon thereafter as circumstances will permit, and in all cases within twelve months from July 1st, 1914. All hot water meters in service on and after July 1st, 1914, for which there is no record of test within four years, shall be tested as soon thereafter as circumstances will permit, and in all cases within twelve months from July 1st, 1914.

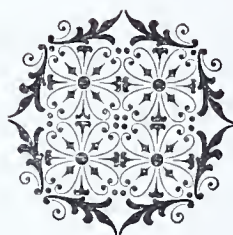
XIII. Request Tests:

Each utility shall upon the written request of a consumer, and if he so desires, in his presence or that of his authorized representative, make a test of the accuracy of his meter. When a consumer desires, either personally or through a representative, to witness the testing of a meter, he may require the meter to be sealed in his presence before removal, which seal shall not be broken until the test is made in his presence. If the meter so tested shall be found to be accurate within the limits specified in Rule VII, a fee determined from the schedule indicated below shall be paid to the utility by the consumer requiring such test; but if not so found, then the cost thereof shall be borne by the utility furnishing the service. When making such request, the consumer shall agree to the basis of payment herein specified. A report of such test shall be made to the consumer, and a complete record of such test shall be kept as specified in Rule VI. The amount of the fee shall be two dollars for each heating service meter having an outlet not exceeding one inch for hot water meters and an inlet not exceeding one inch for condensation meters; for other hot water meters having an outlet not exceeding two inches, the test fee shall be five dollars per meter. Rates for meters not included in the above classification, or which are so located that the cost is out of proportion to the fee specified will be furnished by the Commission upon receipt of complete specifications.

XIV. Refunds:

If a meter be found to be fast at any test by more than four (4%) per cent., an allowance or refund shall be made to the consumer by the utility, equal to all the excess charged the consumer, figured

back from the date of test through the entire period of the current bill, unless it can be shown that the error is due to an accident or other cause, the exact date of which can be determined, in which case it shall be figured back to such time.



THE PUBLIC SERVICE COMMISSION
OF THE
COMMONWEALTH OF PENNSYLVANIA

Rules and Regulations
PERTAINING TO
Water Service Utilities

ADOPTED APRIL 9, 1914

PREPARED BY
Prof. R. H. Fernald, University of Pennsylvania
Prof. L. H. Harris, University of Pittsburgh



V. Accidents:

Each utility shall keep a record of and shall furnish to the Investigator of Accidents for the Commission, in accordance with the rules of the Commission, reports of any and all accidents happening in or about or in connection with the operation of its property, facilities or service, wherein any person shall have been killed or injured, or property damaged or destroyed, with a full statement as far as possible of the causes of such accidents, and the precautions, if any, taken as prevention against future accidents of similar character.

VI. Records and Reports:

All records required by these Rules shall be kept within the State, at an office or offices of the utility located in the territory served by it, and shall be open for examination by the Commission or its representative. Each utility shall notify the Commission of the office or offices at which the various classes of records are kept, and shall file with the Commission such reports as the Commission may from time to time require.

PART II.

METERS.

VII. Allowable Error:

No water meter shall be placed in service nor allowed to remain in service, which has an error in registration of more than four (4%) per cent. when water is passing through it at approximately the following rates of flow:

$\frac{5}{8}$ inch meter,	6 gallons per minute;
$\frac{3}{4}$ inch meter,	10 gallons per minute;
1 inch meter,	20 gallons per minute;
$1\frac{1}{2}$ inch meter,	30 gallons per minute;
2 inch meter,	50 gallons per minute;
3 inch meter,	90 gallons per minute;
4 inch meter,	180 gallons per minute;
6 inch meter,	300 gallons per minute.

VIII. Periodic Tests:

No utility furnishing metered water service shall allow a water meter to remain in service for a period longer than, or for a registration greater than, that specified in the following table, without checking it for accuracy, and readjusting it if found to be incorrect beyond the limits established in Rule VII.

$\frac{5}{8}$ inch meter,	10 years or 100,000 cubic feet;
$\frac{3}{4}$ inch meter,	8 years or 150,000 cubic feet;
1 inch meter,	6 years or 300,000 cubic feet.
All meters above 1 inch, 4 years.	

IX. Meter Test Records:

Whenever a water service meter is tested, the original test record shall be kept as specified in Rule VI, indicating the information necessary for identifying the meter, the reason for making the test, the reading of the meter before being disturbed, and the accuracy of the meter, together with all data taken at the time of the test. This record must be sufficiently complete to permit the convenient checking of the methods employed and the calculations made. - A record shall also be kept, preferably numerically arranged, indicating date of meter purchase, when purchased after July 1st, 1914, name of manufacturer, its size, its identification, its various places of installation with dates of installation and removal, and the dates and general results of all tests.

X. Installation of Meters:

Each water service meter installed after July 1st, 1914, shall have been tested for accuracy by the utility with one year previous to its installation. It shall also be inspected by the utility for proper connections, mechanical condition, and suitability of location within sixty (60) days after installation.

XI. Facilities for Testing:

Each utility shall provide and maintain suitable and adequate facilities for testing its water service meters, in each case to be satisfactory to and approved by the Commission. Each utility shall own a complete testing equipment of a form approved by the Commission. The accuracy of the testing equipment will be established from time to time by a representative of the Commission at a place to be designated by it. After January 1, 1915, tests made with uncertified equipment shall not be deemed authoritative.

XII. Meters in Service without Test Records:

All water meters in service on or after July 1st, 1914, for which there is no record of test within five years, must be tested as soon thereafter as circumstances will permit, and in all cases within two years from July 1st, 1914.

XIII. Request Tests:

Each utility shall upon the written request of a consumer, and if he so desires, in his presence or that of his authorized representative, make a test of the accuracy of his meter. When a consumer desires, either personally or through a representative, to witness the testing of a meter, he may require the meter to be sealed in his presence before removal, which seal shall not be broken until the test is made in his presence. If the meter so tested shall be found to be accurate within the limits herein specified, a fee determined from the schedule indicated below, shall be paid to the utility by the consumer requiring such test; but if not so found, then the cost thereof shall be borne by the utility furnishing the service. When making such request the consumer shall agree to the basis of payment herein specified. A report of such test shall be made to the consumer, and a complete record of such test shall be kept as specified in Rule VI. The amount of the fee shall be two dollars for each water service meter having an outlet not exceeding one inch; for other water service meters having an outlet not exceeding two inches, the test fee shall be five dollars per meter.

Rates for testing meters not included in the above classification, or which are so located that the cost is out of proportion to the fee specified, will be furnished by the Commission upon receipt of complete specifications.

XIV. Refunds:

If a meter be found to be fast at any test by more than four (4%) per cent., an allowance or refund shall be made to the consumer by the utility, equal to all the excess charged the consumer, figured back from the date of test through the entire period of the current bill, unless it can be shown that the error is due to an accident or other cause, the exact date of which can be determined, in which case it shall be figured back to such time.



